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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,917	02/08/2002	Younglok Kim	I-2-176.3US	3610
24374	7590	04/20/2006	EXAMINER	
VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			HOANG, THAI D	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/071,917

Applicant(s)

KIM ET AL.

Examiner

Thai D. Hoang

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 02/15/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 and 15-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

(i) Claims 1-4 and 13-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-4 and 13-14 of U.S. Patent No. 10/071903. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

The limitations recited in claims 1-4 and 13-14 are the same limitations recited in claims 1-4 and 13-14 of copending Application No. 10/071903 respectively, but the claims have different preambles.

(ii) Claims 1-4 and 13-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-4 and 13-14 of U.S. Patent No. 10/079107. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

The limitations recited in claims 1-4 and 13-14 are the same limitations recited in claims 1-4 and 13-14 of copending Application No. 10/079107 respectively, but they have different preambles.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dabak et al, US Patent No. 6,775,260 B1, in view of Rowitch et al, US Patent No. 6,628,702 B1, hereinafter referred to as Dabak and Rowitch respectively.

Regarding claims 1 and 13, Dabak discloses a system called "Space time block coded transmit antenna diversity for WCDMA". Dabak teaches the system, see figs. 1-2 and col. 4, lines 9-52, comprising:

Receiving generated data symbol  $S$  from input data 106 (generating a first data field of symbols);

The space time transmit diversity (STTD) encoder 110 encodes symbols  $S$  having complex conjugate  $S^*$  (encoding said first data field producing a second data field having complex conjugates of the symbols of said data field)

The  $S$  data code is associated with ANT1 112, and wherein  $S^*$  data code is associated with ANT2 114. Dabak does not disclose the  $S$  and  $S^*$  data symbols are spread by using a different channelization code. However, Rowitch discloses that the data is process and transmitted over two or more antennas, wherein the processing may include covering the data for each antenna with a particular channelization code; col. 1, lines 31-35 (spreading said first and second data fields, wherein said first data field is spread using a first channelization code and said second data field is spread using a second channelization code, each channelization code being uniquely associated with one of a first and second antennas). It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the method disclosed by Rowitch into Dabak's system in order to eliminate the interference for improving the quality of the signal.

The  $S$  and  $S^*$  data symbols are transmitted by RF signals over antenna ANT1 112 and ANT2 114 respectively (transmitting an RF signal including said first and second spread data fields over a first and second antenna).

Regarding claims 2 and 14, Dabak discloses the system perform the step of scrambling the  $S$  and  $S^*$  by a scrambling code  $C^K$  (208, 220, 214) for  $S$  and  $S^*$  data

symbols. See figs. 1-2, col. 4, lines 33-40 (further comprising the step of scrambling said first and second spread data fields by a scrambling code associated with said base station).

Regarding claim 3, Dabak discloses that the data symbol  $S$  comprises a sub-data  $S_1$  and a sub-data  $S_2$ . See figure 1 (wherein the symbols of said first data field of symbols are grouped into a first and second sub-data field).

Regarding claim 4, Dabak discloses the STTD encoder 110 encodes the sub-data  $S_1$  and its complex conjugate  $S_1^*$  and the sub-data  $S_2$  and its negative complex conjugate  $-S_2^*$ . See figure 1 (wherein the symbols of said second data field of symbols are grouped into a third and fourth sub-data field, wherein said third sub-data field is the negative complex conjugate of said second sub-data field and said fourth sub-data field is the complex conjugate of said first sub-data field).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-4 and 13-14 have been considered but are moot in view of the new ground(s) of rejection.

Page 11, lines 1-7 of the remarks, Applicants argue Dabak does not disclose the  $S$  and  $S^*$  data symbols are spread by using a different channelization code. Examiner respectfully agrees. However, Rowitch discloses that the data is process and transmitted over two or more antennas, wherein the processing may include covering the data for each antenna with a particular channelization code; col. 1, lines 31-35.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D. Hoang whose telephone number is (571) 272-3184. The examiner can normally be reached on Monday-Friday 10:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang

A handwritten signature in black ink, appearing to read 'Doris H. To', with a large loop at the start and a trailing flourish.

**DORIS H. TO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**



**Applicant: Kim et al.**  
**Application No.: 10/071,917**

**Amendments to the Drawings:**

Please replace drawing sheets 1-4 with the attached drawings sheets 1-6.

Approved  
TH  
4/3/06